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MAT II β Protein Subunit Sequence

cDNA

	-60	CGTCGATCCTGGGTTGGAGGAGTGGCGGCGCTGAGGCTGGAGAGCGCGGGC	-1
(1)	M V G R E K E I S I H F V P G S C R L V E E E E I P N R R L V L V		(33)
+1	ATGGTGGCGGGAGAGAAATCTTATACATTTGTGCCGGAGCTGTCGGTGGAGAGAGTAATTAACATCCCTAATAGGAGGGTCTCTGGTT		(99)
(34)	T G A T G L L G R A V H K E F Q Q N N W H A V G C G F R R A R P K		(66)
100	ACTGGTCCCACTGGGCTCTTGGCAGAGCTGTACACAGAAATTCAGCAGATAATGGCATCGAGTTGGCTGTGGTTTCAGAGAGCAGACCA		(198)
(67)	F E Q V N L L D S N A V H I I H D F O P H V I V H C A A E R R P		(99)
199	TTTGACAGGTATATCTGTGGATCTAATGAGTCTACACATCATGATTTACGCCCATGTTATAGTACATGTCAGCAGAGAGAACCA		(297)
(100)	D V E V E N Q C Q C A Q C A S G N L T A K E A A V G A F L I		(132)
298	GATGTTGTAGAAATACGACCATGTCGCCCTCAACCTTAATGGATGCTTCTGGGAATTTAGCAAGAGGACAGCTGCTGTGGAGCATTTCTCAIC		(396)
(133)	Y I S D Y V F D G T N P P Y R E E D I P A P L N L Y G K T K L D		(165)
397	TACATTAGCTCAGATTATGATTTTGTAGAACAAATCCACCTTACAGAGAGGAAGACATACCAGCTCCCTAAATTTGTATGGCAAAACAAATTAGAT		(495)
(166)	G E K A V L E N N L G A A V L R I P L Y G E V E K L E S A V T		(198)
496	GGAGAAAGGCTGCTCTGGAGAACATCTAGGAGCTGCTGTTTGGAGGATTCCTATTCGTATGGGGAAGTTGAAAAGCTCGAAGAAAGTCTGTGACT		(594)
(199)	V M F D K V Q F S N K S A N M D H W Q Q R F P T H V K D V A T V C		(231)
595	GTATGTTTGATAAAGTGCAGTTCAGCAACAAGTCAGCAACATGGATCACTGGCAGCAGAGGTTCCCCACACATGTCAAAGATGGGCCACTGTGTGC		(693)
(232)	R Q L A E K R M L D P S I K G T F H W S G N E Q M T K Y E M A C A		(264)
694	CGGCGCTAGCAGAGAGAGATGCTGGATCCATCAATTAAGGGAACCTTTCTAGTGTCTGGCAATGAACAGATGACTTAAGTATGAATGGCATGTGCA		(792)
(265)	I A D A F N L P S S H L R P I T D S P V L G A Q R P R N A Q L D C		(297)
793	ATTGCAGATGCTTCAACCTCCCGCAGCTCACTTAGACCTATTACTGACAGCCCTGCTCAGCAGCAGACGCTCCGAGAAATGCTCAGCTTGACTGC		(891)
(298)	S K L E A C T L G I G O R T P F R I G I K E S L W P F L I D K R W R Q		(330)
892	TCCAAATGGAGACTTGGGCATTGGCCACAGCAACCAATTCGAATGGAACTCAAGATCACTTTGGCCCTTTCCTCATTCAGCAGAGATGAGACAA		(990)
(331)	T V F H Ter		(334)
991	ACGGCTTTCATAGTCTATTTGTTGGGTCCTTTTTTAAATGAAGAATATAGTATGGCACTTTTAAAGACAAAGGAATAGTTTGTAT		(1089)
1090	GAGTACTTTAATGTGACCTTAGGACTTTTCAGGTAAATAGTCTTTCGACTAGTAGAAATCTGTAAAGAACTAAAGGCAGTCAATGCTTGTG		
1189	CAGTAATTTTCTTATCAATTTTGTTCCTGGTAACTGGATCTGAGTATAGTAAATTAATGCTTCAATTAATTTTGAAGACATGAGTAC		
1288	AGACCTGCTAGACTTTTCAGATGAATTTGCTTCTGTAACCTCAATTTTCAGGATTTTGAAGCTGTGACCTTTTCATGTTTATTTA		
1387	AATCTGTGAAATAGTATAAATGTTGTGATTTGCTTCTGAGCTCAGATCAAAATGTTTGAAGAAGGAACTTTATTTTTCGAGTT		
1486	ACGTAGCTTTTATGCTGAGATNTTCAACAGTGTATGATNTGGACTCTACAGCTGTAGCTCTGCTTTTATAGCAGTTATAGGGAGCAC		
1585	TTGAAGAGCGGTGTACATGATTTTTTCTTAGGCAAAATGAATGGCAACGTGATTTTTTAAATATAATATACTGTCTCTTTCATCCCA		
1684	GTTCGCCCTAAGTGATTTTCATATGTGGTTATTACTCATATAATATGGGCTTGTGACCCCTTTCCACCATTTCATGAATATAATAAATAGTACTGCT		
1783	GGCATGT (A) 18+		

polyadenylation signal

FIG. 2

Title: Purified and Isolated MAT II β
Subunit Nucleic Acids and
Polypeptides...
Inventor: Kolb et al.
Attorney Docket No.: 1306/9/2/2

MAT II β Protein Subunit Sequence

cDNA

-60 CGTCGANTCTGGGTTGAGAGAGTGGCGGCGCTGAGCGCTGGAGAGCGGGGG
 (1) M V G R E K E L S I H F V P G S C R L V E E E V N I P N R R V L V
 +1 ATGGTGGGCGGAGAAAGACTGCTATACTTGTTCGGGAGAGTGGCTGGTGGAGAGAGAAATTAACATCCCTATTAAGAGGGTTCTGGTT
 (33) 99
 (34) TGTGCTATG L G R A C H K E F Q Q N N W H A V G C G F F R A R A P A C P K
 100
 (67) F E Q V N L L D S N A V H H I I H D F Q P H V I V H C A A E R R P
 199
 (99) 297
 (132) 396
 (165) 495
 (198) 594
 (231) 693
 (264) 792
 (297) 891
 (330) 990
 (334) 1089
 TTTGAACAGGTTAATCTGTGGATCTTAATGACGTTCAATCATATTGACGCCCATGTTATAGTACATTTGTGACAGAGAGAAGACCA
 GATGTTGTGAATAACAGCCAGATGCTGCCTCAACTTAATGTTGATGCTCTGGGAATTTAGCAAGAGAGCAGCTGCTGTGGAGCATTTCTCATC
 Y I S S D Y F D G T N P P Y E E D I P A P L N L Y G K T K L D
 TACANTAGCTCAGATTATGATTGTATGGAAACAATCCACTTTACAGAGAGAAGACATACCGCTCCCTTAAATTTGTATGGCAAAAACAATAATAGAT
 G E K A L E N N L G A A V L R I P I Y Y E G V E K L E E S A V T
 GGABRAGGCTCTCGGAGAACAACTGAGAGCTGCTGTTTGTAGGATTCCTATATCTATGGGAGTTGAAANGCTCGAAGAAAGTGTGTGACT
 V M F D K V Q F S N K S A N M D H W Q O R F P T H V K D V A T V C
 GTTATGTTTGATTAAGTGCAGTTCAGCAACAGTCAGCAACATGATCATCTGGCAGCAGAGGTTCCCAACACATCTCAAGATGTGGCACTGTGTGC
 R Q L A E K R M L D P S I K G T F H W S G N E Q M T K Y E M A C A
 CGCGCTAGCAGAGAGAGAAATCTGGATCCATCAATTAAGGCAATCTTCACTGTGTGGCAATGACATGATGATTAAGTATGAAATGGCATGTGCA
 I G A D A F N L P S G S I A T T D S P L L G A Q R P R A N A Q L D C
 ATTGACAGATGCTTCAACCTCCCGACGATGCACTTAGACCTATTACTGACAGCCCTGTCTTAGAGCAACCTCCGAGAAATGCTCAGCTGTGCTGC
 S K L E T L G I G O R T P F R I G I K E S L W P F L I D K R W Q
 TCCAAATTTGAGAGCCTTGGGCATTGGCCACGAGAACCACTTTCGAATTTGAAATCAAGAATCACTTTGGCCCTTCTCATTTGCAAGAGATGGAGACAA
 T V F H Ter
 ACCTGCTTCAATGCTATTTGTTGGGTTCTTTTTTTTTTAATGAAAGATAGTATGTGGCACTTTTTTAAGAACAAAGAGAAATAGTTTGTAT
 GAGTACTTTAATGTGACTCTTAGNCTGATTCAGTGAAATGCTCTTGCATAGTGAATCTGTATGAACTTAACGAGCACTTAAGCGGCACTCATGCCGTGTTG
 CAGTAATTTCTTTTATCATATGTTTGTTCGGTAACTTGGAGTTGAGTATGAATTAATTAATGACCTTAATATTTTGAAGCTCAGATGAAGC
 AGACCTGCTGTAGATCTTCAGATGAAATTTGTTCAATCTCGTAACTCCATATTTTCAAGATTTTGAAGCTGTGACCTTTGATGTTGATTTATTA
 AATGTGTAATTAATTAATTAATTAATTTGTTTCTGCTAGCTCAGCTCAAAATTTGTTGAAGAGAGCACTTTATTTTGTGCAAGT
 ACCTGACGTTATGATTAATTAATTAATTAATTTGTTTATGAGATCTTACAGCTTACGCTCTCTCTTTTATGACGTTTATGAGGAGAC
 TTGAAAGAGGCTGTGACATGATTTTTTTCTAGGCCAAATGAATGMAACGTGATTTTTTTTAATTAATAATATPACTGTCTCTTTCATCCCAT
 GTTGGCGCTTAAGTGAATTTTCAATATGTTGTTTACTCATTAATTAATGGGCTTTTCAACATTCATGAAATAATAATTAATGATGACTGCT
 GGCACT (A) 18+

polyadenylation signal

FIG. 4

GGCATGT (A) 18+

tttgcaaaaag	aaactccagg	attctttgaca	gaaagttgtt	gggtttttggt	tttggttttg	60
tttaagtgtt	agttcttacca	atagttttgca	aatagaccaca	ggctttgactg	gcaatttaacc	120
atgaaaacttc	tcatttgggta	ttttcggagac	tactacggggg	aactcagctac	cagctttact	180
gccatgtgga	gaactgcacg	agattccggg	attggaatca	aaatgctaata	ttaaaaggctc	240
aaagtgaagct	gctcctcacg	ttttggcggtg	cctgcgctct	ctgcaggcag	aagcgaaaca	300
agaccagca	agagaaggca	gaggctaaga	ccatcccggt	atctgctctc	ctgaaataat	360
tctggagtca	tgcttgaat	atggagcagg	atggagcagg	taagaactag	caattcaaga	420
aatgaagcat	tctagagtaa	gagatgcttt	aaaagcattc	cagtgaacgc	ctgctaaaac	480
cagaattgtt	gtgtaaagaa	aatagaacg	gggtgtcattc	atttcccttaa	aacataacct	540
cgggacatgt	aagaataaag	caactttagt	tactgaccgg	gagaaccagg	ttatgaaggg	600
ctcagctaa	tctcactagc	tgacaataca	gaattgcact	tctcatttacc	attttaaatg	660
caattatgta	tataaagt	ctacataaat	aaggatttta	tctgtagtgt	gttcccttcc	720
agatgttctt	tgtctttgta	tgaattgaat	ctgctaacat	aacttttagt	tccaggctgc	780
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ggcgtttgtg	tgcctatagac	acctaccatca	ttaaagaaaa	tgattaaaaaa	ccatatccaa	900
acatatgcc	ctagaactgt	ccccaacttt	tacggggaaa	gtatcaagtc	agatttttcaa	960
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ccctaataaa	agccaaactg	atgacacagta	atagcctgtg	tttaaaaaaa	aaaaaatcgg	1320
aacataagaa	acctcagctg	gtcttcgatt	actgttctag	agaaacttta	tgtttacacg	1380
aataaggaaa	tgagttttgt	ttgggggttg	aggaggaagg	aaagtcattg	tgttctgacg	1440
tggaanaact	ctttaaaagg	ctgcttagtc	tttagtttga	aaataaacca	aaaagggtta	1500
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gagcttgcta	tctctgggac	acaagaaccc	ttggactgtt	cggtgcaaa	ttggcaaatc	1620
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gctcaccaag	gctgggctcg	tgtggcccaa	tcttgcaatc	cccaggcg	tgtttcttaa	1860
agagtgggtg	tgattcttgt	ttaaaccaatt	aagaagtcgg	accccggtct	agtttcttgt	1920
tctgttaatta	tggtgtaagt	ccaaggatct	gcgttttga	gaggtacct	cgattgtcat	1980
cttctctccc	ctcacaactt	tttattttta	attagtttaa	aatagtttta	catttttgat	2040
atctcacaca	caggtttttt	ctttttttta	gcataccagg	aaagacaaatg	ctgacgacgc	2100
caaccgtttt	attttttatc	cttgtctttt	tctaaatctt	tcaaaacccc	cacctagagc	2160
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ggcagcgaa	gcgggaagcg	gcgagcgggg	tctgtctggg	cctaggggag	gcgggcccag	2580
gcgcgtctag	ctgagcccg	cgctgatctt	gggttgagg	aggtggcgcg	cgctgaggct	2640
gcggcggtgaa	gacggcggg					2660

FIG. 6

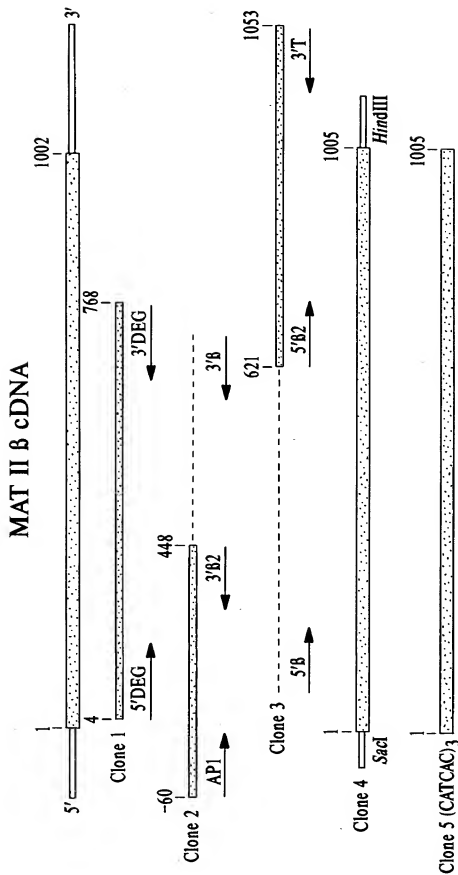


FIG. 7

cDNA
-60 CGTCGATCCTGGGTTGGAGGAGTGGCGGCGCTGAGGCTGCGGCGTGAAGACGCGCGGC -1

(1) M V G R E K E L S I H F V P G S C R L V E E E V N I P N R R V L V (33)
+1 ATGGTGGGCGGAGAGAACTGTCTATACACTTGTGTCCTCCGGGAGCTGTCGGCTGGTGAGGAGGAGGTTAACTCCCTAATAGGAGGGTTCGTGTT 99

(34) T G A T G L L G R A V H K E F Q Q N N W H A V G C G F R R A R P K (66)
100 ACTGGTCCACTGGGCTTCCTGGCAGAGCTGTACACAAAGATTTTCAGCAGATTAATGGCATCGAGTGGCTGTGGTTTCAGAAAGCAGACCAAAA 198

(67) F E Q V N L L D S N A V H H I I H D F Q P H V I V H C A A E R R P (99)
199 TTTGAACAGGTTAATCTGTGGATTCATATGAGGTTTCATCATCAATTCATGATTTTCAGCCCATGTTATAGTACATTTGCAGCAGAGAGACCA 297

(100) D V V E N Q P D A A S Q L N V D A S G N L A K E A A A V G A F L I (132)
298 GATGTTGTAGAAAATCAGCCAGANGCTGCCTCTCACTTAATGTGGATGCTTCGGGAATTTAGCAAGGAAGCAGCTGCTGTTGGAGCATTTCTCATC 396

(133) Y I S D Y V F D G T N P P Y R E E D I P A P L N L Y G K T K L D (165)
397 TACATTAGCTCAGATTATGTATTTGATGGAACAAATCCACCTTACAGAGGAGGACATACACAGCTCCCTCAATTTGTATGGCAAAACAAAATTAGAT 495

(166) G E K A V L E N N L G A A V L R I P I L Y G E V E K L E E S A V T (198)
496 GGAGAAAAGGCTGTCTCGAGAACAACTCTAGGAGCTGCTGTTTTCAGGATTCCTATTCTGTATGGGAAAGTTGAAAAGCTCGAAGAAAGTGTGTGACT 594

(199) V M F D K V Q F S N K S A N M D H W Q Q R F P T H V K D V A T V C (231)
595 GTTATGTTTGATATAAGTGCAGTTTCAGACAAAGTCAGCAAAACATGATATCATCGCAGCAGAGGTTCCCAACATGTCAAAGATGTGGCCACTGTGTGC 693

FIG. 8A

(232) R Q L A E K R M L D P S I K G T F H W S G N E Q M T K Y E M A C A (264)
694 CGG CAG CTAG CAG AAG AAG ATG CTGG ATCC ATCA ATT AAG GGA ACCT TTT CACT GGCT CGG CAA TGA R CAG ATG ACT AAG TAT GAA ATG C A T G T G C A 792

(265) I A D A F N L P S S H L R P I T D S P V L G A Q R P R N A Q L D C (297)
793 ATT CGA GTG C C T T C A A C C T C C C C A G C A G T C A C T T A A G A C C T A T T A C T G A C A G C C C T G C T A G G A G C A C A C G T C C G A G A A T G C T C A G C T T G A C T G C 891

(298) S K L E T L G I G Q R T P F R I G I K E S L W P F L I D K R W R Q (330)
892 T C C A A A T T G G A G A C C T T G G C A T T G G C C A A C G A A C C A T T T C G A A T T G S A A T C A A G A A T C A C T T T G S G C C T T T C C C T A T T G A C A G A G A T G G A G A A 990

(331) T V F H Ter (334)
991 A C G G T C T T T C A T T A G T C T A T T T G T G T G G G T C T T T T T T T T A A A T G A A A G T A T A G T A T G T G G C A C T T T T T A A G A C A A A G G A A A T A G T T T T G T A T 1089

1090 G A G T A C T T T A A T T G T G A C T C T T A G G A T C T T T C A G G T A A A T G A T G C T C T T G C A C T A G T A G A A A T T G T C T A A G A A A C T A A A G G G C A G T C A T G C C C T G T T G 1189

1189 C A G T A A T T T T C T T T T A T C A T T T G T T G T C C T G C T A A C T T G G A G T T T C A G T A T A G T A A A T T A T G A T C C T T A A T A T T T G A G A G T C A G G A T G A A G C 1288

1288 A G A C T G C T G T A G A C T T T T C A G A T G A A A T T G T C A T C T C G T A A C C T C C A T A T T T T C A G G A T T T T G S A A G C T T T G A C C T T T T C A T G T T G A T T A T T T T A 1387

1387 A A T T G T G A A A T A G T A T A A A A T C A A T T G S G T A C A T T A T T T G C T T T G C C T G A C T C A G A T C A A A A T G T T T G A A G A A G G A A C T T T A T T T T T T G C A A G T T 1486

1486 A C G T A C A G T T T T A T G C T T G A G A T A T T T C A A C A T G T T A T G T A T T T G S A A C T T C T A C A G C T T G A T G C C T C C T G C T T T T A T A G C A G T T T A T T G G G G A G C A C 1585

1585 T T G A A G A C G T G T G A C A T G T A T T T T T T C T A G C A A A C A I T T G A A T C A A A C T G T A T T T T T T A A T A T A A T A T A A C T G T C C T T T T C A T C C C A T 1684

1684 G T T G C C C T A A G T G A T A T T T C A T A T G T G T G G T T A T A C T C A T A A T A A T G G G C C T T G T A A G C C T T T T C A C C A T T C A T G A A T A A T A A T A T A T G T A C T G C T 1783

GGCATGT (A)₁₈₊

polyadenylation signal

FIG. 8B

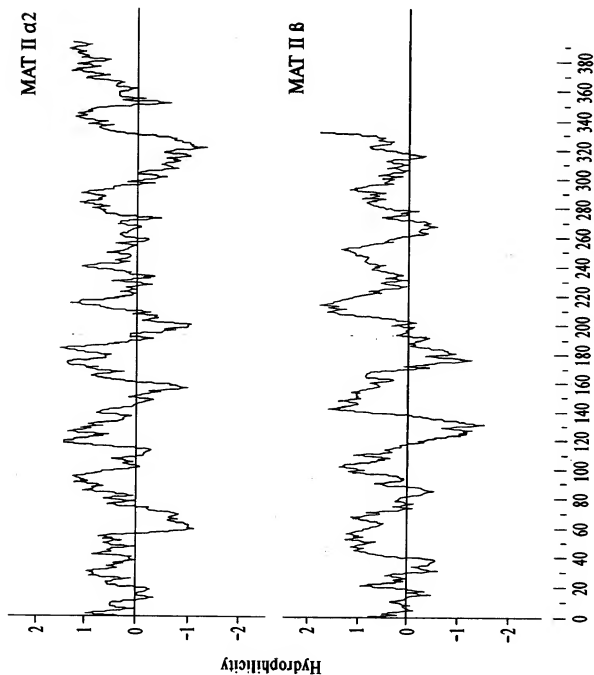


FIG. 9

FIG. 10A

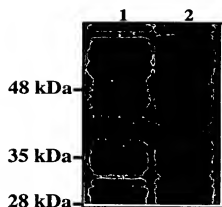


FIG. 10B



FIG. 10C

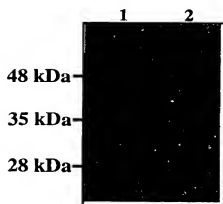


FIG. 10D

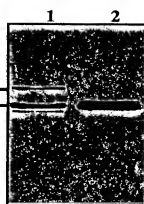


FIG. 11A

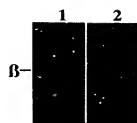
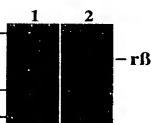


FIG. 11B



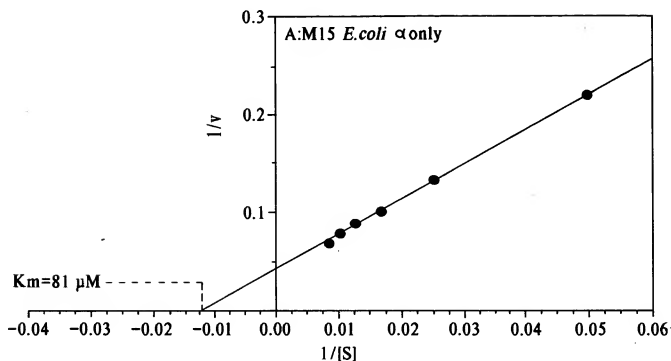


FIG. 12A

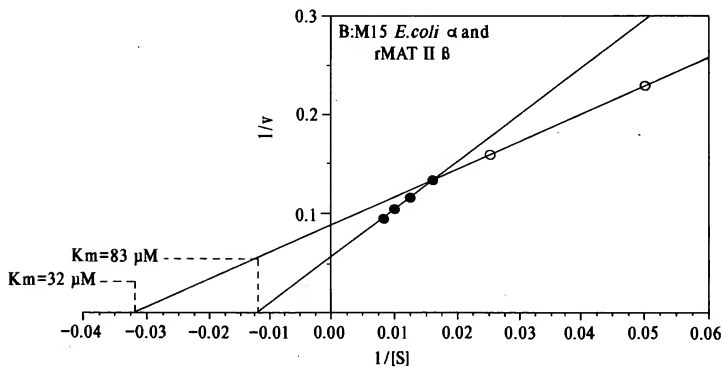


FIG. 12B

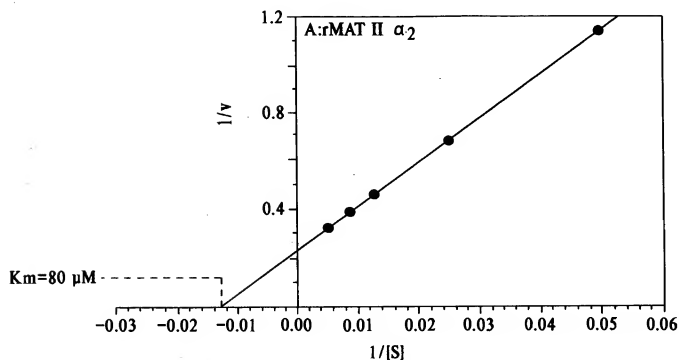


FIG. 12C

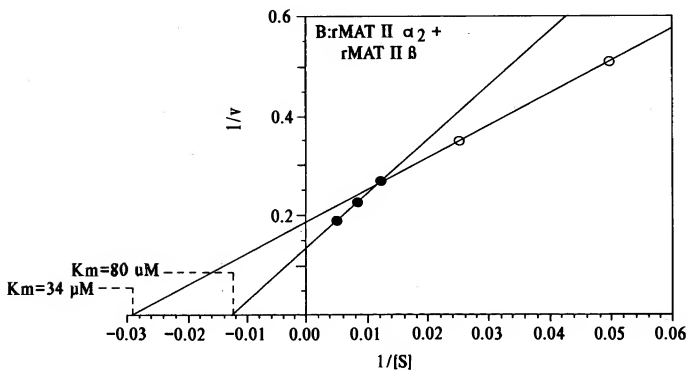


FIG. 12D

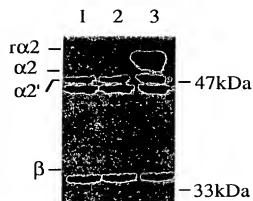


FIG. 13

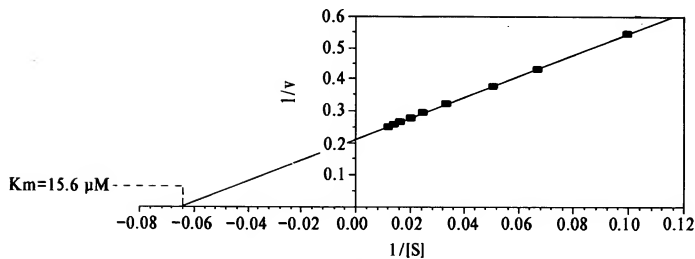


FIG. 14A

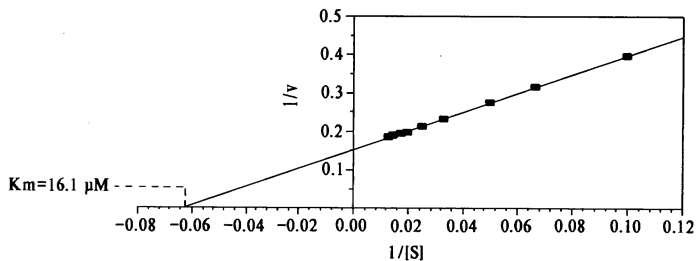


FIG. 14B

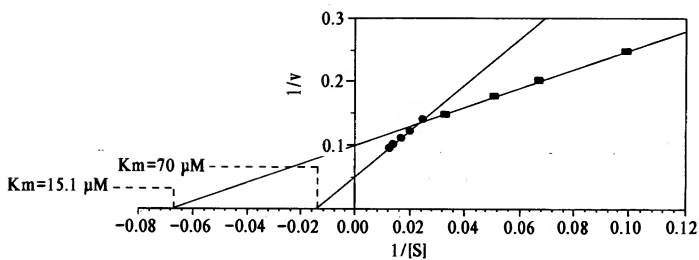


FIG. 14C

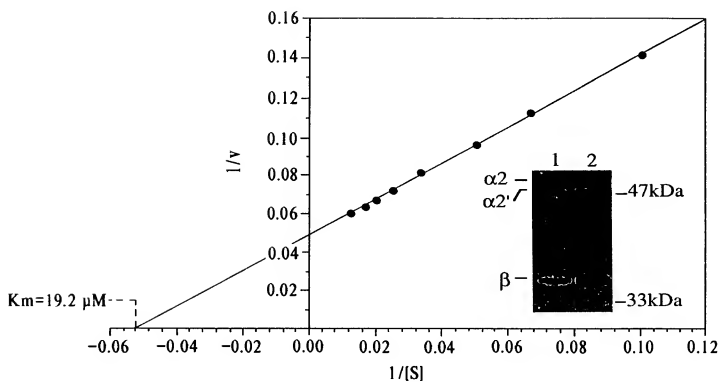


FIG. 15

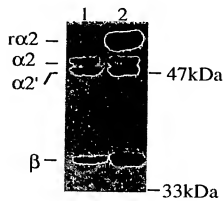


FIG. 16



FIG. 17A



FIG. 17B



FIG. 17C

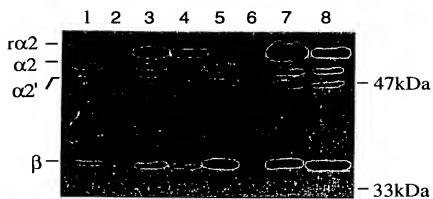


FIG. 18A

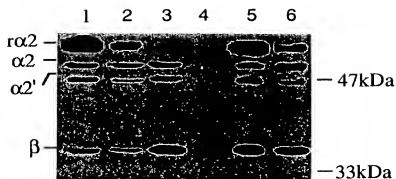


FIG. 18B

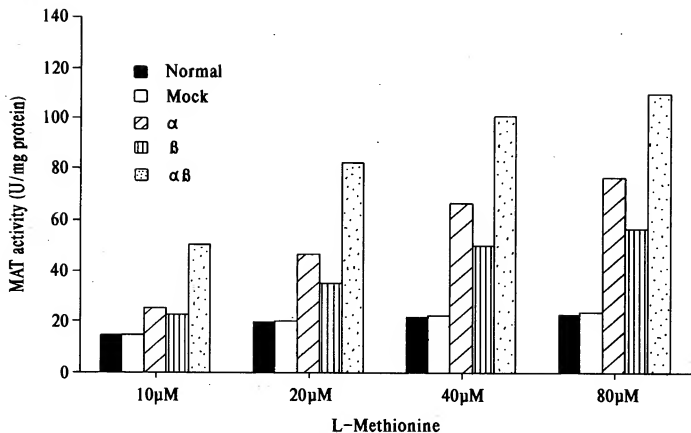


FIG. 19

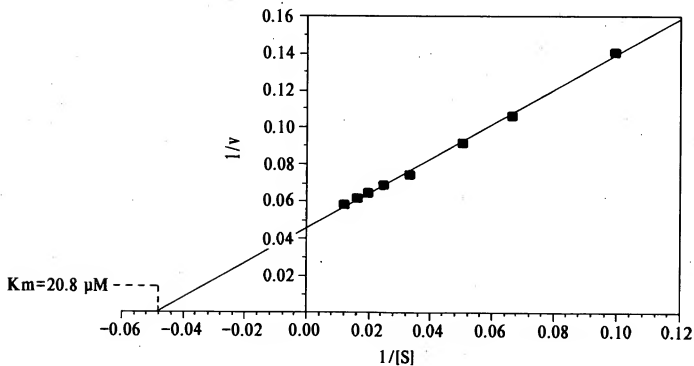


FIG. 20

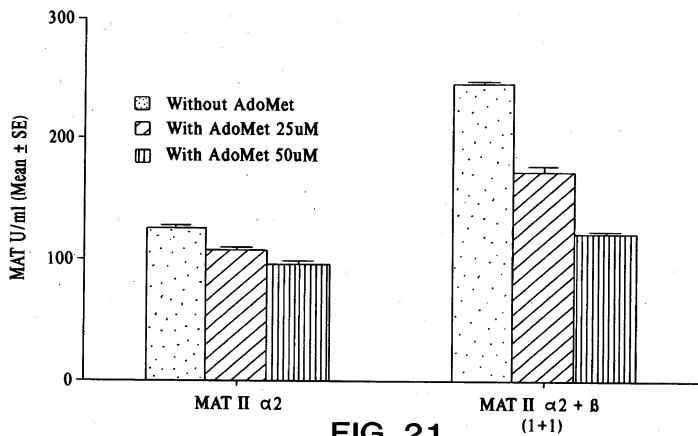


FIG. 21